

Claims

1. A theft prevention system including an object control device for controlling a prescribed operation of an object targeted for 5 theft prevention, and a mobile terminal device for instructing the object control device to control the prescribed operation, the mobile terminal device comprising:

an instruction transmitting unit operable to transmit to the object control device a warning mode instruction indicating to set 10 a warning mode;

an electronic key receiving unit operable to receive an electronic key from the object control device;

an electronic key storage unit;

an electronic key writing unit operable to write the received 15 electronic key to the electronic key storage unit; and

a control instructing unit operable to instruct the object control device to control the prescribed operation, using the stored electronic key, and

the object control device comprising:

20 an instruction receiving unit operable to receive the warning mode instruction;

a mode setting unit operable to set the warning mode on receipt of the warning mode instruction;

25 an electronic key generating unit operable to generate the electronic key on receipt of the warning mode instruction;

an electronic key transmitting unit operable to transmit the generated electronic key to the mobile terminal device; and

an object control unit operable, when the warning mode has

been set, to control the prescribed operation exclusively in accordance with the control instruction from the mobile terminal device using the electronic key.

5 2. A mobile terminal device for instructing an object control device to control a prescribed operation of an object targeted for theft prevention, comprising:

 an instruction transmitting unit operable to transmit to the object control device a warning mode instruction indicating to set
10 a warning mode;

 an electronic key receiving unit operable to receive an electronic key from the object control device;

 an electronic key storage unit;

15 an electronic key writing unit operable to write the received electronic key to the electronic key storage unit; and

 a control instructing unit operable to instruct the object control device to control the prescribed operation, using the stored electronic key.

20 3. The mobile terminal device of Claim 2, wherein

 the instruction transmitting unit further transmits to the object control device a normal mode instruction indicating to set a normal mode, and

 the mobile terminal device further comprises:

25 a completion notification receiving unit operable to receive from the object control device a completion notification that indicates completion of normal mode setting; and

 an electronic key deleting unit operable to delete the stored

electronic key on receipt of the completion notification.

4. The mobile terminal device of Claim 2, wherein
the electronic key storage unit is a portable memory card.

5

5. The mobile terminal device of Claim 2, wherein
the mobile terminal device is a mobile telephone,
the instruction transmitting unit transmits the warning mode
instruction via a mobile telephone network, and
10 the electronic key receiving unit receives the electronic key
via the mobile telephone network.

6. The mobile terminal device of Claim 2, wherein
the control instructing unit instructs the object control
15 device to control the prescribed operation, by transmitting the
electronic key and control instruction information prescribing the
control, by short range radio to the object control device.

7. An object control device for controlling a prescribed
20 operation of an object targeted for theft prevention in response
to a control instruction from a mobile terminal device, comprising:
an instruction receiving unit operable to receive a warning
mode instruction indicating to set a warning mode;
a mode setting unit operable to set the warning mode on receipt
25 of the warning mode instruction;
an electronic key generating unit operable to generate an
electronic key;
an electronic key transmitting unit operable to transmit the

generated electronic key to the mobile terminal device; and

an object control unit operable, when the warning mode has been set, to control the prescribed operation exclusively in accordance with the control instruction from the mobile terminal
5 device using the electronic key.

8. The object control device of Claim 7, wherein
when the warning mode has been set, the object control unit prohibits a prescribed operation from being performed using a
10 mechanical key.

9. The object control device of Claim 7, wherein
the instruction receiving unit further receives from the mobile terminal device a normal mode instruction indicating to set a normal
15 mode,

on receipt of the normal mode instruction, the mode setting unit further sets the normal mode,

the object control device further comprises a completion notification transmitting unit operable to transmit to the mobile terminal device a completion notification indicating completion of
20 normal mode setting, and

when the normal mode has been set, the object control unit prohibits the prescribed operation from being performed in accordance with the control instruction from the mobile terminal device using
25 the electronic key.

10. The object control device of Claim 9, wherein
when the normal mode has been set, the object control unit

controls the prescribed operation of the target object in accordance with a mechanical key.

11. The object control device of Claim 7, wherein
5 the instruction receiving unit receives the warning mode instruction from the mobile terminal device.

12. The object control device of Claim 7, wherein
the instruction receiving unit receives the warning mode
10 instruction from a mobile terminal device other than the mobile terminal device.

13. The object control device of Claim 7, wherein
the target object is provided with a sensor unit operable to
15 output the warning mode instruction to the object control device on sensing an irregularity, and

the instruction receiving unit receives the warning mode instruction from the sensor unit.

20 14. The object control device of Claim 7, wherein
the mobile terminal device is a mobile telephone, and
the instruction receiving unit receives the warning mode instruction from the mobile telephone via a mobile telephone network.

25 15. The object control device of Claim 7, wherein
the object control unit receives the electronic key and control instruction prescribing the control of the prescribed operation of the target object from the mobile terminal device by short-range

radio, and controls the prescribed operation in accordance with the received control instruction using the received electronic key.

16. A theft prevention system including an object control device

5 for controlling a prescribed operation of an object targeted for theft prevention, a first mobile terminal device for transmitting a warning instruction to the object control device and a second mobile terminal device for instructing the object control device to control the prescribed operation, the first mobile terminal device comprising:

10 an instruction transmitting unit operable to transmit to the object control device a warning mode instruction indicating to set a warning mode, and

the second mobile device comprising:

15 an electronic key receiving unit operable to receive an electronic key from the object control device;

an electronic key storage unit;

an electronic key writing unit operable to write the received electronic key to the electronic key storage unit; and

20 a control instructing unit operable to instruct the object control device to control the prescribed operation, using the stored electronic key, and

the object control device comprising:

an instruction receiving unit operable to receive the warning mode instruction;

25 a mode setting unit operable to set the warning mode on receipt of the warning mode instruction;

an electronic key generating unit operable to generate the electronic key on receipt of the warning mode instruction;

an electronic key transmitting unit operable to transmit the generated electronic key to the mobile terminal device; and

an object control unit operable, when the warning mode has been set, to control the prescribed operation exclusively in
5 accordance with the control instruction from the mobile terminal device using the electronic key.

17. A mobile terminal device for instructing an object control device to control a prescribed operation of an object targeted for
10 theft prevention, comprising:

an electronic key receiving unit operable to receive an electronic key from the object control device;

an electronic key storage unit;

an electronic key writing unit operable to write the received
15 electronic key to the electronic key storage unit; and

a control instructing unit operable to instruct the object control device to control the prescribed operation, using the stored electronic key.

20 18. A control method for use by a mobile terminal device that instructs an object control device to control a prescribed operation of an object targeted for theft prevention and includes an electronic key storage unit, comprising the steps of:

transmitting to the object control device a warning mode
25 instruction indicating to set a warning mode;

receiving an electronic key from the object control device;

writing the received electronic key to the electronic key storage unit; and

instructing the object control device to control the prescribed operation of the target object.

19. A computer program for use by a mobile terminal device
5 that instructs an object control device to control a prescribed operation of an object targeted for theft prevention and includes an electronic key storage unit, the program comprising the steps of:

transmitting to the object control device a warning mode
10 instruction indicating to set a warning mode;

receiving an electronic key from the object control device;
writing the received electronic key to the electronic key storage unit; and

instructing the object control device to control the prescribed
15 operation of the target object.

20. The computer program of Claim 19, wherein
the computer program is recorded on a computer-readable recording medium.

20

21. The computer program of Claim 19, wherein
the computer program is transmitted on a carrier wave.

22. A control method used by an object control device that
25 controls a prescribed operation of an object targeted for theft prevention in response to a control instruction from a mobile terminal device, comprising the steps of:

receiving a warning mode instruction indicating to set a warning

mode;

setting the warning mode when the warning mode instruction is received;

generating an electronic key;

5 transmitting the generated electronic key to the mobile terminal device; and

controlling the prescribed operation exclusively in accordance with the control instruction from the mobile terminal device using the electronic key.

10

23. A computer program used by an object control device that controls a prescribed operation of an object targeted for theft prevention in response to a control instruction from a mobile terminal device, the computer program comprising the steps of:

15 receiving a warning mode instruction indicating to set a warning mode;

setting the warning mode when the warning mode instruction is received;

generating an electronic key;

20 transmitting the generated electronic key to the mobile terminal device; and

controlling the prescribed operation exclusively in accordance with the control instruction from the mobile terminal device using the electronic key.

25

24. The computer program of Claim 23,

wherein the computer program is recorded on a computer-readable recording medium.

25. The computer program of Claim 23,
wherein the computer program is transmitted on a carrier wave.

5